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CONTENTS

Page

Aids for Good Mobility in the Blind — *Clarence V. Richardson* 1

The Education of Jack Boyer — *Paul C. Mitchell* 11

A Program of Research in Braille Reading — *Carson Y. Nolan, Ph.D.* 18

The Research Program of the National Association for Retarded Children — *Dr. Ross E. Hamilton* 20

A Report on the Grade I Workshop 27

A Work Experience Program — *Eldon Wolfe* 32

The President's Corner — *Donald W. Overbeay* 35

To Put It Briefly — *V. R. Carter* 39

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THE INTERNATIONAL JOURNAL FOR THE EDUCATION OF THE BLIND, INC.

Aids for Good Mobility in the Blind

By Clarence V. Richardson, Travel-Training Teacher

Illinois Braille and Sight-Saving School

Good mobility in a blind person is the best assurance of a successful life. It is the key to freedom and independence socially and economically. At first this statement may seem preposterous to the average person, but when he stops to think, he will realize if one cannot go places by himself he must always depend upon a friend, relative, or paid employee. Such a condition can easily lead to frustration and the creation of multiple emotional problems. Maladjustment would soon ensue, probably affecting the physical health because of the lack of normal exercise in the fresh air and sunshine. To a family this individual would be a burden rather than a joy, and an old axiom says, "People are wanted only as long as they are useful." If the reader wishes to pursue further the mental blocks and inhibitions caused by the inability to travel alone, it is suggested that he read an interesting article, the closing sentence of which is:

> We are as we think, and the blind person who would travel alone or independently must begin the journey within the boundary of his own mind.[1]

From the economic viewpoint, educators of the blind have been compelled to realize that, without the ability to move freely and independently in the home, office, neighborhood, or community, blind people cannot be employed. Many were skilled in various professions and did excellent work, but their employers found it necessary to dispense with them because they were unable to look after themselves efficiently. A considerable amount of time, effort, and money was wasted in training blind people who could only sit in a rocking chair and talk fluently on almost any subject. This deficiency came sharply into focus when the Government discovered it had approximately 1400 totally blind veterans on its hands to be rehabilitated following World War II. These men ranged in age from 20 to 60 and came from all walks of life. Now, for the first time, there was an organization with sufficient money and technical know-how to make a scientific investigation of aids and fundamental requirements essential to good mobility in the blind. Naturally, the oldest and most familiar aid of them all, the cane, received priority.

Cane travel is the science by which blind people guide themselves from place to place by means of a cane. This "long finger" perceives the immediate physical environment and informs its user of obstacles, step-up and step-down situations, thereby preventing colliding, stumbling, and falling. The cane, or some facsimile, has been utilized by both sighted and blind people for centuries. In the beginning, it was a straight stick, called a staff, which could be either an aid to walking or a weapon for defense purposes.

In the literary classic, THE LAST DAYS OF POMPEII, Lytton gives a vivid description of the destruction of that city by the volcano, Vesuvius, in the year 79 A. D. During the height of the storm when the darkness was impenetrable except by blinding flashes of lightning, the little blind slave girl, Nydia, was separated from her companions, Glaucus and Ione. She had been guiding them to the seashore, where they were planning to escape by boat. In the following quotation the word staff is used to indicate a straight stick generally about head high:

> At length it occurred to Nydia, that as it had been resolved to seek the seashore, for escape, her most probable chance of rejoining her companions would be to

persevere in that direction. Guiding her steps then, by the staff which she always carried, she continued with incredible dexterity, to avoid the masses of ruin that encumbered the path—to tread the streets —and unerroringly (so blessed now was that accustomed darkness, so afflicting in ordinary life!) to take the nearest direction to the seaside.[2]

The long staff apparently remained in use for the following fifteen centuries, when variations began to appear. In 1629 an artist by the name of Van Den Enden engraved a large plate with 12 pictures showing the staffs to be breast high. This collection is called LIFE OF THE BLIND, and is in the same group of pictures at Blindiana Library, Perkins School for the Blind, Watertown, Massachusetts, as the following ones. These pictures were painted between the 15th and 18th centuries and depict various types of canes. For the ladies they were about waist high and knobbed; for the men some were breast high with T handles, some were under arms and crutch-like, while others were head high or higher. Seven of the artists were: Domineico Feti, head high; Corot, head high or better; Schidone, shoulder high; Chardon, breast high; Billamena, breast high; Bouchardon, head high; and Caraci, shoulder high.[3]

Somewhere around the beginning of the 18th century, it became fashionable to carry artistic canes approximately 36 inches high. Some of them were exquisitively carved, some had golden knobs, while others possessed outstanding adornments. Since the ladies were already using short canes, it seems likely that the blind men gradually adopted them, because they have been in use for more than a century. There are many references in TREASURE ISLAND to a blind man named Pew, as to how he looked and the manner in which he used his cane. One quotation will suffice to give an excellent picture of Pew and his cane. This story commenced "in the 17th year of Grace" which probably refers to 1817:

He was plainly blind, for he tapped before him with a stick, and wore a great green shade over his eyes and nose; and he was hunched, as if with age or weakness, and wore a huge old tattered seacloak with a hood, that made him appear positively deformed.[4]

From the scientific study of "Foot Travel at Valley Forge," under the direction of R. E. Hoover, two definite changes emerged. At that time the average length of the cane was about 36 inches. He and his assistants found that a longer one would afford more protection and that it should vary according to the height of the individual. Generally speaking, the top of the cane should come to the point of the elbow, which would permit the tip to touch the ground somewhere between three and six inches ahead of and beyond the extended left foot when the cane is held in the right hand. The other change was the "rhythmatic swing," "Valley Forge," or "Hoover method."[5]

The Industrial Home for the Blind has published a lesson plan covering this subject under the title INSTRUCTIONS IN PHYSICAL ORIENTATION AND FOOT TRAVEL.[6]

In both of these articles it is stated that one should hold the cane just below the crook, with the back of the hand outward and the pointer finger extending down the right side, while the thumb is on the left or inside. The hand is held in the *center* of the body, while the elbow is held *against* the side. When the right foot extends forward, the cane swings to the left ahead and beyond the left foot touching the ground. The process is reversed when the left foot steps forward.

The writer of this paper has been totally blind from an accident since the age of nine. During this period he has traveled a great deal on foot with the help of a cane and has always been deeply interested in this subject. Also, he has taught "cane travel" at the Illinois Braille and Sight Saving School since the fall of 1950, and so, from fifty years of personal experience,

makes the following observations: Holding the cane in the center of the body seems to be an unnatural position and, therefore, is fatiguing. Another disadvantage is that should the cane catch on an object, the handle would be forced against the stomach or side before the traveler could stop. Why not permit the arm to hang loosely with the hand in front of the right leg, thus placing the handle beyond the side? Should there be a backward thrust by some obstacle, the arm would be pushed outward or backward or the cane could slide through the hand without injuring the body. If the traveler is thoroughly familiar with the ground and is merely swinging the cane to detect obstructions and not touching the ground, in this position the natural sway of the body while walking will move the cane with a minimum of effort required by the wrist and arm to maintain the rhythmatic swing.

For the traveler living in small cities who is sure of the ground to be covered, here is a suggestion to relieve monotony and fatigue. Grip the cane as described above; then, simply turn the hand over with the palm up and the handle pointing out on top of the wrist. Swing the cane several times loosely in the hand, allowing it to find its natural position. The pointer finger will curl around at an angle instead of pointing straight down and the little finger will not grip. In this manner the cane will balance on the pointer finger underneath and the middle and ring fingers above. The rhythmatic swing can be carried out equally as well in this position. However, it is more advantageous where the traveler is simply following a shore line which is either the edge of a side walk or a solid line of buildings. Place the tip of the cane at the edge of the sidewalk or against the building six or eight inches ahead of the right foot. When the right foot advances, swing the cane ahead and beyond left and back to shore line, or simply straight ahead along shore line, if the traveler wishes only to walk in a straight line. If the latter movement is preferred, relax the tension of the fingers allowing the cane to rise, almost to a right angle with the hand, while stepping up to it. Now tighten fingers and give wrist a slight flip and the can will move forward virtually by itself. The primary benefit of this grip is that, should there be a backward thrust, the handle will pass harmlessly up the forearm, or, if the fingers have not been loosened, the arm will bend naturally at the elbow.

Psychologists hold that the more one varies any activity the less fatiguing it is, so here is a different position to be employed while ascending stairs. Place the thumb on the left side of the cane and encircle with the pointer finger until it touches the thumb. Now, place the back of the middle finger against the inside of the cane which should be toward the body with the back of the hand out or perpendicular to the ground. If the thumb and forefinger carry the weight, the middle finger can easily push the cane forward to touch the step. Then, lift the cane and set on step above to determine how high to raise the foot when stepping up, so as not to be embarrassed by trying to step on a step that is not there. This hand position is also good in a crowded store when one wishes only to locate little children and their strollers and maintain a protective swing just in front of the body.

The more safety rules one knows, the more adequately he can protect himself. When a sightless person rides in an automobile, he should relax and slide down a little in the seat and stretch his feet out. Should there be an unexpected or sudden stop, he is less apt to be thrown forward against the windshield or back of another seat, because his feet will brace him. If he has an ordinary cane, it should always be held at the side or placed upon the floor, so he cannot be thrown forward against it

and injured. The other types of canes should be folded or telescoped to render them harmless.

About 15 years ago a number of metal canes were developed, some telescoped, some folded, while others were of the ordinary type. The most common is the straight one-half inch aluminum tube bent in a half circle at one end to form a handle, which can be hooked over the arm when not in use. The straight part is white, covered with either paint or tape, and has a red band at the bottom to make it visible to motorists at night. There is a leather grip extending down eight inches from the curve of the handle which serves several purposes. For example, by sliding the hand, the cane can be lengthened or shortened to suit the occasion. The leather can be gripped by the hand because of the size and rough texture, and also this leather protects the hand from the cold metal in the winter. The bottom of the cane is fitted with a replaceable wooden peg to prevent wearing away of the metal as well as to silence the hollow pipe sound.

Since wood is affected by moisture, it loses its tactual and auditory sensitivity, especially in snow, so metal tips, some with springs, as in "The Long Finger,"[7] are becoming more popular, provided they are properly insulated, so the traveler will not be too conspicuous.

A wide variety of telescoping and folding metal canes have been invented, perhaps the most popular of which is the Colrod. This walking stick is made of aluminum tubes that fit into each other and vary from seven to twelve inches in length, so the individual can obtain the desired height. It is very convenient because of its light weight and the fact that it folds, permitting the traveler to place the cane in his pocket when not in use. The importance of these benefits cannot be overemphasized for the assurance and convenience they afford the owner.

While the cane is still the most common aid to the foot traveler, the electronic engineers are approaching the problem from a technical standpoint. During the last ten or twelve years a score of devices have been invented to assist blind people in locating obstacles in their paths as well as step-downs and step-ups, which primarily include curbs and stairways.

In order to facilitate investigations, a group of professional blind people in New York, known as the Technical Research Council, drew up a list of requirements for good travel aid.

1. An aid must locate obstacles roughly ten to twleve feet ahead of the traveler and 25 degrees to each side of his path, while traveling at the average rate of five or six feet per second.

2. It must warn of any step-down of more than two inches when six or eight feet in front of the traveler.

3. The information must be transferred to the brain in a simple manner, so as not to require an excessively long training period, and must not need any more concentration than the average motorist uses in driving an automobile in normal traffic.

4. The aid must not be unduly conspicuous.

5. Its performance must not be affected by weather conditions.[8]

Thomas Benham, professor of physics at Haverford College, is in charge of the research being conducted at the Biophysical Instrument Company in Philadelphio, and was cooperating with the late Clifford M. Witcher of the Massachusetts Institute of Technology in perfecting the Sensory Aid developed by the U. S. Army Signal Corps. This electronic device has proven to be the most satisfactory because it is as small as a camera and weighs only four and one-half pounds. It is carried by a handle, through which the traveler receives vibrations warning of step-downs and step-ups and other obstacles. The projection system is located in the front, so the invisible infrared radiations can pass freely

through the material of the case to survey the ground ahead. By turning the device left and right slightly, the traveler can examine as much of the ground to either side as he desires. This aid is inconspicuous because the invisible infrared radiations are very dark and the color of the case can be made to match. The receiving mechanism is installed beneath the projector and connected with the handle in order to transmit its information.

Sixty-seven blind people were trained in the use of this electronic guidance aid and, after considerable experimentation, they discovered it was affected by puddles of water and shadows as well as by atmospheric conditions. The scientists estimate it will take several years to overcome these technical difficulties but they hope to have this aid ready for manufacture in the near future.[9]

Another important development in the electronic field is the "sensitive cane," which is designed primarily for the detection of street curbs. Many blind people feel this is the most essential function of a cane. This probe is used in a similar manner to the ordinary cane except it does not touch the ground to ascertain uneveness, because an electric wave passes out of the bottom of the cane. The important factor is to keep the tip at the same proximity to the ground throughout the entire swing. Any change in this elevation either speeds up or slows down the pulsation rate in the handle, thus notifying the traveler of a step-up or a step-down. With this aid tapping would not be necessary, and for this reason less attention would be called to the traveler. This cane must also be low in cost, light in weight, and its mechanism foolproof to place it within reach of the majority of blind people.[10]

The last important tangible aid to be discussed is the guide dog. Upon this subject there appears to be more definite fixations than any of the previous aids. Many people dislike dogs, and for this reason do not wish to care for them, or to be annoyed with their constant companionship. However, there is a need for these well-trained dogs, especially by those who have difficulty in orientation, and this particular point will be discussed later in the paper. Those who wish a comprehensive knowledge of the Seeing Eye Dog should first read "First Lady of the Seeing Eye."[11]

Having discussed the principal mechanical aids to foot travel, the physiological and psychological factors should be considered. However, before these are discussed, two widespread hypotheses must be scientifically disproved. Whenever some people cannot understand an event or characteristic, they frequently turn to the supernatural for an explanation. There are two false concepts pertaining to good mobility in the blind. One of these is that they possess a mysterious sixth sense of direction which guides them to their desired goal. The other erroneous belief is that the skin on the forehead is so sensitive that they can feel the atmospheric pressure of the presence of obstacles. This warning enables them to stop or proceed around the obstruction. All normal people have five senses, according to psychologists who stress the point; if one of these becomes impaired or lost, the handicapped person will automatically develop the remaining four to compensate for the impairment or loss.

For more than two hundred years scientists have been trying to ascertain how bats fly in dark caves without striking the walls or ceilings. Robert Galambos has studied all these experiments and performed some himself to prove scientifically the "auditory theory." He constructed a soundproof room with padded walls and ceiling containing a network of wires through which the bats had to fly.

When the ears of the bats were plugged, they would not fly unless prodded and

they blundered into the wires, walls and ceiling. Upon removal of the plugs, they again flew willingly and without colliding with any obstacles. Next, the mouths were sealed shut, producing the same effect as the ear plugs. Unsealing the mouths restored normalcy. Blindfolding the bats made no change in their orientation. This experiment conclusively proves that bats make sounds with their mouths which strike obstacles and are reflected back to their ears, thus enabling them to guide themselves entirely by sound.[12]

Further proof to counteract the fantastic theory of "facial vision" is found in the following quotation from Dr. Samuel Perkins Hayes:

> The sense of obstacles, then, is merely one of psychological responses to fear, analogous to the "gooseflesh" of human beings and the hair-bristling of animals, and is caused in the same way by the contraction of small muscles under the skin. Sounds give the cue to the presence of danger, and the instinct of preservation arouses the response in the skin, which is then misinterpreted by the blind as a result of external stimulation. When these cues come, the sensations in the face occur, even if the subject is wearing a mask; when the sound cannot get to the ears, no sensations arise in the face, even if one is really in danger from an approaching object of which the subject has no knowledge; when sounds are misinterpreted as indicating the presence of an object, we have the illusory perception of obstacles.[13]

Paul J. Langan, former Superintendent of the Kentucky School for the Blind, says:

> A good sense of direction, acuteness of hearing, awareness of environment, accurate foot perception, proper balance and gait, are all inherent characteristics of a good traveler. Some good "tricks of the trade" to be acquired are good memory perception and recognition of common landmarks.[14]

A good sense of direction means one must know thoroughly the points of the compass, right and left. If this knowledge is not present, one can neither give nor follow directions as to how to locate a specific place. Since the nocturnal heavenly bodies merely reflect light that cannot be felt, the sun is the only true guide a blind person has through his tactual sense. Therefore, he must learn the directions in which streets run and buildings face. From this knowledge, he can set up many indicators that will be beneficial should he become confused. These are the wind direction, factory whistles, and a host of other characteristic sounds which can be recognized, so that general directions can be ascertained. Many times one can find himself when lost in the snow or when he has unknowingly turned and is not going in the direction anticipated. According to Rouse and Worchel, a veering tendency in the blind is the same as in sighted people. Usually it is caused by hypersensitiveness of one labyrinth in the ear or by one leg being shorter than the other, or by the superior functional development of one side of the body as in being either right- or left-handed.[15]

Acuteness of hearing is probably the most essential factor in foot travel of the blind, because the ears are second only to the eyes in number of perceptions received (see footnote 12). The general public feels that blind people hear better than sighted people. This concept is not necessarily true; they only interpret, understand, and locate sounds because it is necessary if they are to comprehend what is taking place. Some sighted people also develop their sense of hearing to assist them, as hunters frequently locate squirrels by the cracking of nuts and the dropping of shells. In the early days of the automobile industry, the mechanics had to rely almost entirely upon sound to locate the difficulty in a malfunctioning motor.

Leather heels act as an automatic built-in radar system sending out sound waves with each step, which strike obstacles and are returned to the ear, thus giving a vague idea of the distance and size of the object. This constant "radar system" is of inestimable benefit when walking alongside buildings, solid fences, or high retaining curbs. If the person is familiar with the step-ups and step-downs, the cane can swing almost effortlessly with the natural sway of the body and the traveler should be relaxed,

because of the protection against bicycles and the assistance of the sound barrier enabling him to walk a straight line. In traveling in open residential areas, the leather heels will warn of trees, large posts, and automobiles parked on the the sidewalk. With all the notise created by this highly mechanized world, this travel aid cannot be overemphasized.

If it seems too expensive because leather wears faster than rubber, triangular shaped steel plates can be set into the leather. This will make them wear much longer and be still more audible. The one drawback to the leather heel is the enhanced danger of falling by slipping, especially on wet or waxed surfaces. If the traveler does not wish to take this risk, he should have steel heel plates tacked on rubber heels. This will make them more audible, and yet not greatly increase the danger of slipping. Crepe soles should never be worn because they are noiseless and, to offset this terrific handicap, many blind people develop bad walking habits, such as slapping the toes down, stamping, clicking the tongue, or snapping the fingers.

For the acquisition of knowledge, the sightless person depends next upon his sense of touch or tactual perceptions. Since this paper is dealing chiefly with the aids and ability to travel, the technicalities of the science of tactual perception will not be discussed except to suggest that both hands be used to obtain as accurate a picture as possible of any object. The hand is able to feel through the cane in the same manner the feet feel through the soles of the shoes. One must learn to detect cracks in the sidewalks, unevenness and different types of material, as frequently they are the only guides. For example, in crossing a large filling station, there is nothing but cement on either side with no grass or building to act as a shoreline. Sometimes, the ground has settled, widening the cracks where the cement blocks join, enabling one to follow with a cane or by stepping upon it. Again, there is a downward slant between the walk and the street which can be recognized by the cane, or used by placing one foot on the slant and the other on the flat walk. By these guides an individual can maintain a straight course across a seemingly landmarkless terrain. The vast majority of sidewalks slope down several feet back from the street crossing, thus indicating to the pedestrian an approaching step-down into the street. Tree roots lift walks up, making excellent landmarks, while iron trap doors serve the same purpose. Cinders, gravel and two dirt streaks generally inform the traveler where a driveway crosses the walk.

Good mobility in the blind is a well-integrated coalition of the above-named factors, plus mental imagery, which is the ability to perceive the physical environment in relationship to oneself. It is contended in this paper that without mental imagery no blind person can travel successfully. This mental faculty is shared by all and is utilized by sighted people in the same manner as by the blind. It must be divided into two categories: the ability to create a picture in a strange siuation from an accurae description by another person, and the ability to perceive a picture by actual travel repetition. Close observation is required to distinguish between these learning processes. To the travel training instructor this difference is paramount, if he is to teach adequately. Several examples will illustrate these two types.

1. Example in creative picture forming.

A is a blind person who arrived by cab at a hotel in a strange city. The following day he wished to walk along to the bus depot to pick up his suitcase and was given the following instructions. "Go out the front door and turn left, and you will be going north on the west side of the street. Cross four streets and you won't confuse

them with alleys because of the traffic. Each intersection has a stop light and a step-down, so listen to the traffic and you'll know when to cross. Somewhere you must cross to the east side, as the depot is on that side. After you cross the fourth street, there will be an open corner with the wide cement platform of a filling station. Go on till you come to a building. The door is about 15 or 20 feet ahead. After you enter turn again to the right and through another door. Then, left diagonally across the room to the information desk, where you can ask about your grip." Mr. A made the trip on foot alone in a reasonable length of time and encountered no difficulties.

2. A junior in high school without sight in creative picture forming.

Student B was given the following instructions to locate a house in an unfamiliar neighborhood. "Go east on the south side of the street till you come to the alley, which you will recognize by the downward slope of the sidewalk and the gravel of the alley. Turn right for one block to first cement cross street; do not cross. Turn east and go beyond third house, where you will find the only cement drive in the block. Turn north up drive and go to rear of house, turn left and step up on patio and advance six or eight feet to the door, which faces north, and knock. There is another way you could go and it might be easier. Go east on south side of street, crossing alley with its downward slope, gravel and up-slant of the walk to the first street beyond, which you can recognize by a step-down of about six inches and pavement. Do not cross. Turn right for one block, where walk ends, then turn right again and you will pass alongside a vacant lot with two large trees that have raised the walk making regular stumbling blocks. Some twenty feet beyond the second one is the cement drive which you turn right and go up—remember?" Student B chose the second route, because, from the verbalization, he felt more sure of the landmarks in order to locate the house, and returned by the first, as it was shorter.

3. C is a freshman student without sight and has been in school for three years, and learns by rote.

C can locate all the buildings and classrooms without any trouble; he is also quite well-acquainted with the main part of the city. While sitting in the travel training teacher's classroom in the basement, he was asked to name the rooms on the three floors directly overhead. C could not do this, although he had a class in one of them immediately following, and had been going there for one semester. He knew the location of a drugstore on the west side of the Square, the second door south from the north side. He was instructed to go there and make a small purchase and return. Student C completed his assignment with no trouble, while the instructor followed him all the way. To accomplish this task, he had proceeded almost half way around the Square to the right. His next assignment was to go down the same street to the Square and turn to the right, walking completely around it and back home on the same street. C reached the square and made the correct right turn. Following this, he should have made 4 left turns at each corner and finally a right in the center of the east side in order to put himself back on the street from which he started. Instead, he walked straight ahead off of each corner and had to be put back on course by instructor. When he went straight east from the last corner, he was not stopped. Soon he recognized that he was not on the street where he belonged and was helplessly lost. The instructor told him he was proceeding east, one street to the south of where he should be, and that he was going in the correct direction. C could not

orient himself nor could he find the street to return on.

4. Student D has no sight and is in the eighth grade; also learns by repetition.

According to a report by a kindergarten teacher, D ran into a building while enroute from the school room to his dormitory and never traveled alone following his accident. While in the fourth grade, it required some 35 to 40 lessons to teach D the way from the school building to the building in which he roomed. When he reached the seventh grade, he was able to learn the way to the tuning department in one lesson, because he had been on that floor the previous year in the sixth grade. He did not learn his way to the hospital or how to get out of the front door during the remainder of the year. During this time two complications were identified: D could not smell, owing to a physical defect, and could not be motivated.

The lack of interest was revealed in two ways. He always found his way out of the front door on Friday afternoon to board the bus for a weekend at home. Then, D was given a choice of refinishing a seat which he had scratched or of having the $25 repair bill sent to his parents. He was extremely anxious to conceal his bad conduct and welcomed the opportunity to repair the seat himself. The wood shop teacher reported D could now find his project, take it to his own bench and locate all the necessary tools without any assistance. He worked diligently, until the damaged seat had been completely refinished and installed. Then, D returned to his regular assignment and to all the old bad habits. He could not locate his own locker, bench or necessary tools and equipment. D required constant urging to prevent him from sitting idly on his bench.

Case D was selected because of its complication (lack of motivation), and because it shows how difficult it is to determine the cause of one's inability to travel alone.

When a blind person possesses mental imagery, he can sit in a room and perceive the exact location of the furniture, doors and windows; otherwise, he would be unable to walk straight to his objective. The person with the creative mind will be able to change his position frequently and still perceive the room in correct relationship to himself. The individual belonging to the rote category will usually be unable to move about the room and return to where he was sitting or standing. Generally, the latter type will enter the same door, sit in the same seat without moving. When he is ready to depart, he will probably leave by the same door he entered. Many blind people have all the prerequisites of good mobility, plus high I. Q. ratings, and still cannot find their way around in the classroom, dormitory, or home, where they have lived for many years. The best travelers will always be found in the creative-picture-forming category.

If one wishes to determine whether a person has mental imagery or not, simply ask the location of some well-known store. If precise directions are given, the odds are in favor of that person having it. However, if he says, "Oh, it's down there somewhere, just ask anyone and they can tell you," the chances are good that this person cannot recall a mental picture of this locality. A test for the creative type would be to hand them a list of four or five places to go to. If they proceeded systematically without backtracking or turning around several times, it is reasonable to assume they have mental imagery. People have this ability, talent, tendency, or gift in varying degrees similar to that of music, mechanics, athletics, or any other activity in which they participate. Without this faculty, cab drivers would be virtually helpless, regardless of how well they could handle an automobile. Like the

other skills, its full development depends upon motivation.

The only sicentific data on visual imagery (visual and mental imagery appear to have the same connotation), were collected by Jane McReynolds and Philip Worchel at the Texas School for the Blind in Austin. Six experiments proved that total or partial blindness, accidental or congenital blindness, I. Q., or C. A., did not appear to effect one's travel abiilty. In their conclusion they make this statement:

> The hypothesis that visual imagery assists the blind in geographic orientation in the blind was not borne out by the series of six tests.[10]

There should be more scientific investigation of mental imagery to determine the specific psychological characteristic which is so vaguely referred to as bearings, directional sense or good orientation. It is possible that if the travel training teachers had this information, they might be able to assist more people who have travel difficulties.

Fear in its various ramifications is a definite deterrent to the sightless in traveling alone. It mainifests itself in numerous ways. Some are afraid of falling into holes or down stairways, others fear getting lost or being run down by traffic. There is still another insidious form of this psychological monster and that is of revealing blindness itself. If one does not accept this handicap there remains either tolerance or resentment. Complete acceptance is the only way to real happiness. Resentment and bitterness make a person more conspicuous because he will stand like a statue and not move until someone offers to guide him, hand him his hat and coat or some other desired article. If he were to reach out for a clothesrack or an ash tray on the table, and find nothing, he would be terribly embarrassed. Attitudes of this nature prevent an individual from helping himself, and thereby make him a burden to his friends and relatives. In this respect he actually defeats his own purpose. He also deprives himself of a great deal of knowledge which would be obtained by exploration. The person who is not sensitive and discusses these problems frankly receives the social advantages of true companionship and assistance when needed. This is deeply appreciated when one is alone in a restaurant, attempting to cross a busy intersection or negotiating some other travel hazard.

This paper was written to inform the lay person or newcomer in work for the blind with the entire field of foot travel through its references and to emphasize some of the infrequently mentioned aids, which appear vital from the standpoint of a blind individual. The use of the various hand positions, as the cane is employed for its several purposes, will be found very relaxing and restful to one walking long distances and encountering varying conditions. The selection of a cane is such a personal choice, there is no need for a general discussion except to recommend strongly the elbow-high one for the benefits of protection and body posture. If the cane does not adequately fill the needs of the traveler, a well-trained guide dog should be thoroughly investigated before one admits failure. To those who have hearing defects of varying degrees, the leather heel is a blessing in disguise, although it may require a great deal of persistence and patience to make the adjustment from rubber to leather. The tactual perception of the feet is not understood by the newly blinded nor the lay sighted, and this sense should be developed as much as possible because it often warns of of danger and is, sometimes, the only guide in many areas. Many times several of these physical aids are impaired, yet the determined person does an excellent job of traveling alone. With all the finest physical aids available, no blind person can be mobile without the psychological factor of mental imagery. The *type* one possesses

is not important as the *degree*. The tangible world beyond the reach of the hands or the feet cannot be perceived in any way except by smell or sound. Motivation, of course, is recognized as the prime factor in developing any ability to its highest degree, while fear is responsible for deterring more blind people from traveling alone than any other single cause.

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The Education of Jack Boyer

By Paul C. Mitchell, Assistant Principal

New York Institute for the Education of the Blind

The sun came up clear and bright in Wadena, Minnesota, the morning of July 26, 1956. The cool, crisp, morning breeze soon gave way to the dry heat of the summer sun, so important in boosting the height of corn and crops in the shorter growing season of the north country. Soon great billowing, pearl white clouds stormed up in the blue of the zenith and time moved on into the early afternoon. Those who saw the countryside, the rolling fileds of grain, the poplar trees waving in the wind, the turbulent sky, must have marvelled at its beauty. This was a summer day in Minnesota not unlike other summer days the world around. On this day, in Wadena, Jack Boyer was born, never to see the beauties of which so many of the

citizens of Minnesota took for granted. Jack was blind.

At six the little boy was entered in the kindergarten of the Minnesota Braille and Sight Saving School at Faribault. As if nature had not already dealt unkindly with him, he came down with a "cold" while in the first grade. The cold proved to be influenza; it left Jack deaf, ill, and unable to attend school again for almost five years.

When Jack came to the New York Institute for the Education of the Blind in September, 1949, he was totally blind and, for all practical purposes, deaf. The deafness was both real and psychosomatic. His withdrawal and lack of interest made it impossible to converse with him by the spoken word in any degree of success. We human beings have the innate ability to hear only the things we wish to hear. This was particularly true for Jack, who had so little hearing.

I will not recount the many hours of patient work in the Deaf-Blind Department of our school. The first report from this department read, in part, as follows:

> "Many of his classmates . . . have tried to communicate with him . . . but he fails to respond, so believing that he is unable to hear or converse with them, they make no further effort to become acquainted with him. Thus, John reenforces his conclusions that he is being rejected and seeps further into the comfort of his own little world."

Eighteen months later I read this report:

> "1. Concerning School — John is very anxious to do good work in school. He takes great pride in his accomplishments. He is beginning to accept school routine.
>
> "2. Concerning people — John is commencing to gain a kinder feeling toward other human beings. He is becoming aware of the fact that people really want to be friendly with him, if he will only meet them half way. He is realizing the 'give and take' necessary to promote happy human relations. He is a very desirous of making friends with children his own age.
>
> "3. Personality traits — Jack craves attention and affection from others, but he will hardly ever overtly show his affection for others. Jack has become more cooperative since he has begun to realize that we are sincerely interested in helping him. He has a fine sense of humor, and he can take a joke as well as give one."

Jack proved to be a brilliant boy and learned to read Grade 2 Braille with ease. He became a rapid and avid reader. I first came into direct contact with him when Miss Hoshor[1] asked my permission to let Jack attend my General Science class. Jack could not hear a word I said in class, but he read and re-read the Braille text. He took the regular examination in Braille and topped the class with his grade. The pupils themselves brought him into the life of the class. Jack was recognized immediately as a sage who could always answer their most difficult questions and settle their scientific arguments. They devised a sort of game, sometimes wagering that Jack would make a mistake on things they already knew. He never did, and, moreover, he added zest to the game with his superb sense of humor. Jack also completed the examinations for the Eighth Grade Regents Diploma and entered my course in Biology the same year. After getting his Regents credits in Physics and Chemistry, with time hanging heavily on his hands the three years of high school work, he looked about for new absorbing interests. I therefore gave him a college text in zoology and another in astronomy. I asked him to write out any problems or questions. He did this in Braille and I wrote my explanations and answers back to him in Braille. When he signified he was ready, I gave him the final examinations in the two sciences and awarded him his earned credit with high

ratings. Concurrently, Jack took Mr. Gunderson's[2] radio course. Jack is probably the only boy, deaf, sighted or blind, who completed seven sciences in a high school in New York State. One might think that his high school education was overbalanced in favor of science, but he more than completed all the other subjects in high school and with equal brilliance. It is true that he liked science, but radio was his best-liked subject. He called it "electronics" because his interest was in the whole overlying field of theory. Not that he was not interested in the practical side; he built himself a receiver, a transmitter, and a Hi-Fi, while taking the course. Doctor Fowler[3] had reported that Jack could hear almost normally, with his one ear, frequencies in the range of 125, 250, and 500 cps. Jack, under his instructor's tutulege, built an amplifier to filter these frequencies into his ear and discovered it so efficient that he avoided bringing it to my class because he was afraid I would ask him "too many questions."

Jack shirked laboratory work in my sciences. For example, he did not want to do the experiment of preparing oxygen and making the tests because he already knew what would happen. He considered it a waste of time to go through the exercise of "Heating Metals in Air" to see if they gain weight. Jack not only knew they gained weight but he knew how much they gained in fractions of ounces, grams, or whatever unit of measure you wished to consider. Jack knew I thought him lazy. (Jack wrote a leter from college to Doctor Frampton[4] and signed himself "Doctor of Laziness.") Actually, he only wanted to direct his energy in other areas. He attended Social Hour every day where I regularly saw him talking "a mile a minute" into the hand of his girl. Most of the pupils in the school who knew Jack talked in the same way into his hand, using the manual alphabet of the deaf-blind. Later a hearing aid was tried, but nothing seemed better than the manual.

I meant to ask Jack what he used for thoughts. Were they words as he read them in the Braille test? Were they sounds he heard at those low frequencies (they must have seemed very thin and incomplete)? Or were they the symbols he felt when people wrote into his hand? It would be like asking a blind person what he "sees" in his dreams. When Jack dreamed about me — if he ever did — was it a faraway being, a something that asked him questions through a Braillewriter? I often shook hands with Jack but he couldn't get very much of a concept through a mere handshake. Or could he? There are those who claim they can judge a person by the voice, a handshake, or a signature.

One day I thought I had a brilliant idea. What was Jack's idea of God? Here was a boy who had always been deaf and blind. He had never seen any of God's manifestations in nature. Undoubtedly, I thought, he has no idea of God. I resolved that I would ask him. When Jack came to class the next day I took my Braillewriter and wrote, "Jack, what is your idea of God? Tell me what you think, your concept! Understand?"

Jack began writing. He wrote, and continued to write until he had completed a whole Braille page. When Jack had finished he had given me a most outstanding essay on God and all the theological explanations. I learned that Jack had been just as brilliant and responsive in the catechism as in his sciences. A Catholic Father had given much time to satisfying his interest in religious matters.

Jack completed high school with very high marks. His file is one of the heaviest in the school, containing many letters written by the school telling his father of the many times Jack made the academic honor roll. He made one of the highest grades ever attained on the College Apti-

tude Tests. On graduation day it was my privilege to lead him to the lectern where he gave the salutatory address for his class, in words carefully enunciated and quite well understood by the audience. On that day he was awarded the Helen Keller Scholarship of $5,000 to make possible his entry into college. Today he is enrolled at St. Thomas College, St. Paul, Minnesota, where he is majoring in electronics.

How did this happen? What is the metamorphosis through which this deaf-blind child traveled? What does a young deaf-blind child like Jack, without words, think about? What does anyone, sighted or deaf-blind, think about without the use of words? Try thinking thus some time! Think of the most simple train of thought, "I sit," or, "I walk." Do it without words. I have discussed this with psychologists and speech authorities. The consensus of "opinion," *not* including my own, is that all the higher animals think whether or not they have a language. The argument is that thinking is done with symbols and that words as we know them are not necessary. The classic experiment is expressed, "A monkey places boxes one on another to get up to a banana. Therefore a monkey thinks."

There is a lot of popular support for this because thousands of persons will literally back you against a wall proclaiming loudly that their favorite pet can *think*. It is not uncommon to see a Ph.D. curbing her dog under the eaves of Columbia University, swearing by all that is scientific and true, "My little Fifi talks to me. Why, she understands every word I say."

This subject has come up in each of my biology classes the past twenty-five years. Invariably there are one or two pupils who believe their cat, or dog, or other pet capable of thinking and of conversing with others of the animal's kind. Without disparaging the love and affection we have for pets, it is always interesting to note in class that, while the world's greatest cryptographic laboratories can decode the secrets of the Russian satellites, and transoceanic Chinese military signals, they are balked by the "language" of the animals. The class always sees the humor when I say, "If you ever see a dog or a cow pick up a telephone and say, 'Honey, meet me at Liscio's Saturday night at eight,' or go into a Western Union and write out a telegram, 'Having a wonderful time. Wish you were here.'—then we will believe that animals can converse with one another."

It seems quite evident that thinking, as I fathom it, not only depends on words but the ***ability to think***, and the ***extent of thinking*** depends somewhat on the number and type of words available. Speech therapists, and psychologists are correct in saying that thinking is done with symbols, but, in order to think, one must not only have these working symbols in mind, but be able to associate them with respective ideas. It makes little difference what the symbol is, provided the individual can associate the symbol with the mental idea. The word "man" in English, the pictorial symbol for "man" in Chinese, or a manual sign written in the hand of a deaf-blind child, may represent an idea or conception of a man. Of course, it is equally important that the system of symbols carry the same concepts to the minds of those with whom the person converses. Speaking of thinking in Chinese, suppose an English-speaking person is denied the use of English. (This frequently happens when speech centers are damaged.) The reader of this article can enter into this experiment. The idea is to imagine one's self in the same situation as a totally deaf, totally blind person the same age as the reader. Imagine that this deaf-blind person has had all the experiences, the same emotions, the same life as you have had. But, at the present moment, you have no language, you have never heard a word,

Mr. Robert Gunderson, blind staff member at the New York Institute for the Education of the Blind, demonstrates THE CLASSROOM HEARING AID, created and constructed by himself, in collaboration with Dr. Merle E. Frampton, Principal of the Institute. This aid was designed for the students in the Deaf-Blind Department, and allows youngsters with varying degrees of hearing deficiency to adjust the volume of teacher's voice, recording, or radio by use of an individual desk control. In this way, each student can meet his own needs, and all in the classroom hear the same presentation.

you have never learned a system of symbols such as the manual alphabet. Therefore, you do not know your name, nor the name of your father, nor the name of your mother. You do not know your own name because you have never heard it, you have never seen it, and you have no language at your command to express it. In fact, you do not even know that people are identified by voices. You have never heard of Kruschev. You do not know that the United States is 270 billions of dollars in debt, and fortunately for you there are no words to express your thoughts and you therefore cannot worry about it. You do not know your own I.Q. and neither do we because we have no language with which to measure it. Undoubtedly you, the reader, are brilliant, and undoubtedly you have more than average learning and thinking ability but no one has ever been able to break through to your innate capabilities. Since you do not have any knowledge of English, why not try thinking in Chinese? Or any other language, for that matter? I am sure you can see your helpless situation. This, then, is comparable to the position of a totally deaf, totally blind child, or adult, who has no language. It would be as if you and I were to try to think in the language of the Martians. Moreover, we

would have no concepts to fit the Martian words if we knew a few.

What language does a bilinguist use for thinking? When I was associated with Anatolia College in Saloniki, Greece, one of my colleagues, Dr. George D. White, could use Greek, Turkish, and English equally well. As business manager of the college he frequently had occasion to conduct business agreements with Greek and Turkish merchants and businessmen. I asked Dr. White what language he used for *thinking*. He said if he were planning a meeting with a Greek, he thought in Greek; if he were preparing a business conference with a Turk, he worked up his thoughts in Turkish. I am sure that it is apparent that if Dr. White knew no Greek, he could not make his preparations in Greek, and if he knew no Turkish, he would not be able to think in English. Furthermore, if he knew no English he would not be able to think in English. Would it not be logical to say that he *could not think at all* without a language? Is this not the position in which we find a deaf-blind child?

How then do we begin this education of a human being with no words, no associations, no mental concepts coupled with symbols — no language? A language which will promote him from the realm of an animal to the majesty of a human being with the power of thought and the soul of a man! A language which will make him a moral entity capable of accountability, to know right from wrong!

The teacher of the deaf-blind may begin by teaching the manipulation of nouns, associating the vibration symbols or the manual alphabet written in the child's hand with a ball or a doll, or other simple object in contact. If the child can be taught speech through vibration or other methods, the spoken word is sought through long and patient hours. It goes on, day by day, until at long last the child responds with the word "ball" or "doll" in connection with its consciousness of the object. Fortunately, nature is a partner of the teacher. Nature has provided speech centers in the brain of the human to make possible these associations. After the first "break through" the building of a vocabulary of nouns follows with verbs. "Doll sleeps." "Ball rolls." Then may come adjectives. "Little doll." "Hard chair." "Big boy." When the deaf-blind child is intelligent, imagine the thrill to the teacher when the complete sentence develops, "I like school," or, "I love my teacher," and later at the high school level when I asked Jack, in the middle of a more serious conversation, "Do you like the girls?" he answered, "Who doesn't?" Teachers have comparable experiences with all types of children—the slow learner, the normal, and the gifted. While it may seem important to find the Jack Boyers in the 300 deaf-blind school-age pupils in America today, the challenge and rewards are found in every child. No two children have ever been exactly alike, and the teacher in the school for deaf-blind pupils will find the ten or fifteen enrolled to be a most hetereogeneous group.

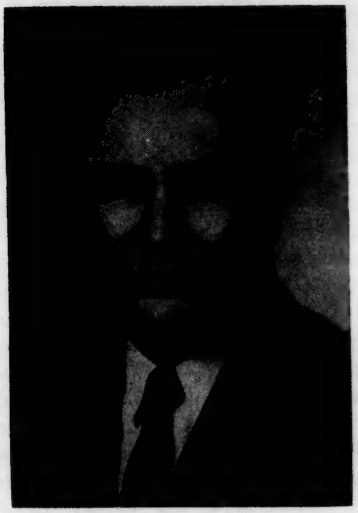
The greatest handicap of all is mental, but when a deaf-blind child is blessed with a good measure of intelligence, he may soon outstrip his peers. This was the story of Jack Boyer. He also had a sense of humor, and courage. I have motion pictures of Jack riding a bicycle on the athletic field. He began first by riding in a circle with the athletic director standing in the center and guiding Jack by means of a long string. Later, after learning the extent and space of the circle Jack rode it alone and without the guiding string. Every deaf-blind child must have these two great attributes: a sense of humor and courage. I have found it in deaf-blind pupils far less academically capable than Jack Boyer.

Undoubtedly I have over-simplified the beginning techniques and continuing prob-

lems. Actually, many different methods are tried in an attempt to make contact with the mind of the deaf-blind child. We have been thinking of the totally deaf, totally blind child. If there is a little vision or hearing, the problems are greatly reduced. Regardless of the problems, whether great or small, the supervisors and teachers in the education of the deaf-blind are facing up to the challenges.

1. Miss Margaret Hoshor, Supervisor, Deaf-Blind Department, The New York Institute for the Education of the Blind.
2. Robert Gunderson, Radio Teacher, (Blind) at The New York Institute.
3. Edmund P. Fowler, Jr., M.D., Consulting Otologist, The New York Institute.
4. Dr. M. E. Frampton, Principal, The New York Institute.

International Journal Trustees Elect New Officers



The Trustees of *The International Journal for the Education of the Blind* met in their regular biennial session during the AAIB Convention in Vancouver, electing new officers, and reelecting the editorial staff. D. W. Olson, Jr., Superintendent of the Kansas School for the Blind, is the President of the organization. First and Second Vice-Presidents, respectively, are John Wallace, President of the Florida School for the Deaf and Blind, and Miss Lois Cox, Principal of the Maryland School for the Blind. E. J. Wood, Superintendent of the Tennessee School for the Blind, was elected Secretary-Treasurer.

Following his election, Mr. Olson issued the following statement: "It is an honor to be elected as President of *The International Journal for the Education of the Blind.* I shall endeavor to continue the policy of making this a professional magazine for those who work with blind children. Our objective is to report in this publication the methods, the techniques, and the experience of anyone who is interested in educating blind children. The Board of Trustees herewith expresses its appreciation to the editors and others who have contributed articles, and we urge all of you to send contributions to *The Journal.*"

Mr. Olson, who succeeds Dr. Alton Kloss as President, has served for seven years as Superintendent of the Kansas school. Prior to his appointment as Superintendent, he served as Principal for a two-year period, and worked as a teacher and principal in the public schools of Kansas for nine years. During this period, he served four years with the Armed Services during World War II. Mr. Olson has a Bachelor of Science degree from Kansas State Teachers College, and his Master of Science degree from the same college in 1947. He also has done graduate work at the University of Illinois.

A Program of Research in Braille Reading

By Carson Y. Nolan, Ph.D., Director of Educational Research
American Printing House for the Blind

The Braille reading process has long been a subject of interest and inquiry for those involved in the education of the blind. Much research has been conducted on: (a) the configuration of Braille; (b) speed of reading Braille; and (c) the hand movements in reading Braille. Few objective studies have been made of perceptual factors involved in Braille reading and its learning or how such factors might relate to reading techniques and teaching methods. It is axiomatic that development of reading techniques and teaching methods depend on a clear understanding of the basic behavioral processes involved. In order to help achieve this basic understanding, the Department of Educational Research of the American Printing House for the Blind has planned an intensive program of research in Braille reading.

The research program will consist of a series of investigations which will deal with the behavioral or perceptual processes basic to reading. The program will be divided into two research projects which, while closely related, deal with Braille reading at different levels of skill. Project I will be concerned with the study of factors important to Braille reading readiness of children in the primary grades. Investigations in Project II will involve study of the behavioral and perceptual processes of skilled Braille readers. A brief description of each project together with some background information for each is given below.

Project I: Processes in Learning to Read

Learning to read is a step in the growth of language related skills, the development of which occurs primarily through associative learning or conditioning. Steps of development leading up to reading are: (a) learning appropriate responses to spoken words; (b) learning to reproduce the sounds that call forth the responses; and (c) learning that symbols stand for spoken language. Authorities agree on four factors that are related to the ability of the child to learn to read and that determine the age at which the child is able to start reading learning. These factors are: (a) intelligence; (b) physical ability; (c) experience and language development; and (d) personal and social adjustment.

Intelligence is positively related to the ability to learn to read and, for sighted children, a mental age of from 6 to 6.5 years is believed a minimum for effectively beginning such learning. Certain physical abilities must be present and at a requisite level of maturation. For example, the child should posses sufficient auditory discrimination to differentiate the sound of spoken speech. His vocal apparatus should be developed to the point where he can accurately reproduce such sounds. He should have the sensory capacity (tactual in the case of blind children) to successfully discriminate small differences in the forms of the symbols that stand for spoken words. The child should have a background of experience and have acquired meaningful concepts from these experiences. Only when printed symbols stand for words used meaningfully in his own speech is the child ready to read successfully. Ability to react realistically to spoken language (follow directions) is essential. Good personal and social adjustment, including emotional stability, self-reliance and ability to participate in

cooperative enterprises, are prerequisites for reading.

Research at the American Printing House on reading readiness will be concerned with only two of the four factors described above. These factors are physical ability and language development. Concentration on these two factors seems desirable since results of research on sighted children concerning the relationships between reading and intelligence, as well as those between reading and adjustment, appear almost directly applicable to the blind.

The studies of physical ability will concern those abilities which, on the basis of previous research findings or in the judgement of the experimenters, appear most involved in beginning findings or, in the judgment of the experimenters, appear most involved in beginning Braille reading. Foremost among these are the tactual-perceptual abilities. Also important are the abilities to perceive and reproduce sounds. Individual investigations of physical abilities are tentatively planned to include the following:

(1) Tactual-Perception

(a) the ability to recognize whether simultaneous or successive simple tactual stimuli are identical or different.

(b) the ability to manipulate tactual forms, presented simultaneously and successively.

(c) the ability to perceive and reproduce tactual patterns.

(2) Auditory-Perception

(a) the ability to recognize whether successive sounds are identical or different.

(b) the ability to vocally reproduce meaningful sounds.

(c) the ability to differentiate similar meaningful sounds.

Aspects of experience and language development shall also be selected according to past research findings and the judgment of the experimenters. Initial research will concern the vocabulary development of the beginning Braille reader to include:

(a) Vocabulary extent — a description of the vocabularies of beginning Braille readers.

(b) Vocabulary correspondence between beginning Braille readers and the available reading material.

(c) Abstraction in vocabulary to include: (1) the relation of the abstract qualities of words to the inclusion in the vocabularies of beginning readers; and (2) the reality of word-object relationships for objects falling within diminishing degrees of immediate experience.

Project II: Processes in Reading

Important in understanding reading behavior is knowledge of the cues that lead to recognition of word symbols and knowledge of the number and extent of reading stimuli that can be sensed in meaningful wholes. Both of these factors have been thoroughly explored for visual reading, and results of these investigations have been successfully applied in remedial reading training. Initially, research on Braille reading will roughly parallel this previous work.

Cue-reduction refers to refinement of a skill through elimination of waste motion. The implication of this concept for reading is that, for skilled readers, less than the complete pattern of stimulation from the word symbol is required to get its meaning. In the case of visual reading, it has been found that cues become primarily reduced to those emanating from (a) individual letters (particularly at the beginning and ending of words), (b) small letter groups, and (c) word shape or form.

The investigation of perceptual span also has played an important part in establishing an understanding of the visual reading process. Perceptual span refers to the number of word symbols that can be

apprehended at a single time. Knowledge of visual span of perception has been utilized in the development of methods for increasing the reading speeds of visual readers.

Initially, then, work included in this project will fall under the following two headings:

(a) Cues in word recognition.

(b) Perceptual span.

While at the time of writing the aspects of Braille reading mentioned above appear most fruitful for research, their somewhat tentative nature must be stressed. The discovery of additional information in the literature or the findings of some of the investigations of the program outlined above may call for the discard of some topics and the inclusion of others yet to be described. The experience of educators of the blind can serve to validate the appropriateness of the approach outlined above. Comments to this end from readers of this article are seriously invited.

It is believed that the program will result in a deeper understanding of the processes involved in learning to read Braille and in reading Braille. Such findings can lead to further developments, such as the development of a diagnostic test of reading readiness and refinement of present methods of teaching beginning reading and remedial reading.

The Research Program of the National Association for Retarded Children

By Dr. Ross E. Hamilton, Member of Board of Directors*

National Association for Retarded Children

The research program of the National Association for Retarded Children is, I am sure, of interest to all present at this Biennial Meeting of the American Association of Instructors of the Blind. The invitation for me to participate in this program on behalf of NARC, received from leaders in AAIB responsible for the development of the program, is ample evidence of this interest.

On my part it is a pleasure to be here to represent Mr. Alton Lund, the President, other officers, and the Board of Directors of NARC at this meeting. There is, in the area of services to the blind retarded, much to draw us closely together in our common and related goals. Through research into the nature of the physical problems causing blindness and mental retardation, there is an even greater common interest. This is the key thought which I would like to present to you for study and such action as you individually or collectively may wish to take.

Unlike the American Association of Instructors of the Blind, the National Association for Retarded Children is a very new organization. NARC was organized only eight years ago. The organizational meeting took place in Minneapolis in 1950.

Previous to this time the parents of the mentally retarded had been invited by the members of the American Association on Mental Deficiency to share in their annual and regional meetings. Through these

*Dr. Ross E. Hamilton, Consultant and Chief of Special Services, State Board of Vocational Education, Division of Vocational Rehabilitation, Olympia, Washington, presented this paper at one of the Joint Workshop Sessions of the 1958 AAIB Convention, Vancouver, Washington.

meetings a nucleus of parents reached the stature where the NARC became a possibility.

In the formation of NARC there is no intent to exclude professional persons. In fact, the NARC has been most careful to initiate and strengthen a policy which would bring the best of professional knowledge and thought to bear on the program of NARC.

In the few short years of NARC, parents of the mentally retarded have been able to marshal the support of great numbers of people. It has been possible to clarify program goals and to take steps in the realization of these goals.

The program of NARC, dedicated to the welfare of the mentally retarded, grows out of the work of the Board of Directors, the several committees within the organization, the annual meetings, and the deliberations of state and local chapters. As we examine the work of the committees it is possible to identify the immediate and long-range goals of the organization.

Aside from the committees on internal organizational and related activities, there are a number of committees with functions that will be of interest to you. First, I would like to refer to the Education Committee. In NARC's short life span to date this committee has probably reflected the greatest interest of the parents of the mentally retarded throughout the nation. The work of the Education Committee has done much to assist local and state chapters of NARC in developing direction in their efforts to get educational services heretofore not made available to the mentally retarded. The committee has concentrated also on the nature of educational services for the mentally retarded.

This latter effort has been of great value, for there were many and still are a large number of professional educators who see little or no role for education in the area of the mentally retarded. Fortunately, this attitude is changing slowly, and I would like to believe that the change is happening because of the development of a rationale to warrant the change. I would like at this point to leave this thought for a few moments in order that I might deal with it later when I discuss research.

The work of the Education Committee is closely related to the work of the Institutions Committee, for the efforts of the Education Committee are geared to the development of educational services for the mentally retarded in local communities, private schools, and state institutions.

The work of the Institutions Committee has been of great interest to me. As I have listened to committee reports, read the same reports, studied the activities of the committee, and discussed the same subjects informally with committee members, I have seen the beginnings of a shift in emphasis. In its early days this committee concentrated on activities designed to improve attendant services in institutions and on related services. More recently an analysis of charges for institutional care was made attempting to develop some policy and guidelines which would eliminate many of the difficulties associated with charges in the states of the Union.

Very recently (and here I must say that I am speculating), I have sensed a shift in emphasis. I have the impression that there is today in this committee on institutions great and significant thought at work. This thought may be very significant if it becomes effective in program development. I thing that it may have considerable bearing on the research which I wish to discuss.

Permit me at this point to personalize the work of these two committees. The Education Committee is presently chaired by Mrs. Marion Dubrin of Milwaukee. The Institutions Committee is headed by Mrs. Adrian Miller of Topeka, Kansas. You will note that both chairmen are women. Both are mothers of mentally re-

tarded children. Mrs. Durbin is Jewish. I do not know Mrs. Miller's religious attachments, but I think I can safely say she is motivated by clear Christian beliefs. The one common element in these two religious backgrounds is a deep conviction about the dignity and worth of each person.

Giving of one's time and talents to the leadership of a committee of a national organization is both demanding of one's time and demanding of very constructive effort. The intensity and integrity of purpose of these two women shows that they have been able to rise above the immediateness of the problems of their own children and to fit the needs of their children into a larger web or spectrum. Both are sensing progress in their committee activities, and with the intelligence with which both are well blessed, they are giving a quality of leadership which is characterized by a logical and objective search for the truth.

As I examine the work of these committees and as I speculate on the outcomes of their thought and labor, I am inclined to think there will be a significant impact on educational and institutional services for the mentally retarded, the blind mentally retarded, the blind, and all children and adults. Why do I assert this? Again, I would like you to bear with me while I bring into consideration the work of another committee of NARC.

This other committee deals with vocational rehabilitation services. The first chairman was Jerry Weingold of New York City. Jerry's vigorous leadership, augmented by his knowledge of law, has realized some very remarkable progress in federal law and programs. The new chairman is Morley Hudson of Louisiana. As I analyze Morley, I see a man successful in a complex business, a man who believes local, state and Federal governments to be servants of the people. Morley certainly believes in government, but government for a purpose. Laws and governmental programs should be designed to make it possible for each citizen, each mentally retarded citizen, or each blind citizen to rise to the greatest possible level of responsibility, as an individual, and as a member of the several communities in which each one lives.

Observing Morley Hudson, as his Vocational Rehabilitation Committee and the Legislative Committee of NARC work up understanding and support of H.R. 10608 and S. 3551 in Congress, I see also Morley's convictions about government at work. This proposed legislation is geared to extend independent living for severely handicapped as far as possible. It is designed to reduce dependency to a minimum and to do this consistent with respect for the dignity and worth of each person. I would add, too, that this effort respects also the limitations of the mentally retarded.

The work of these people is commanding more and more respect and support. As respect and support grow I can foresee some significant developments related to research.

The work of the Research Committee of NARC has also been dramatic. Headed by Mrs. Sidney Davidson of Connecticut, its first efforts resulted in the appointment of a medical consultant to the staff of NARC. It was obvious that NARC was not going to be able to raise all the money that could be used for research. Dr. Masland's first responsibility as Medical Consultant was to make a thorough survey of the research reports and current studies related to causes of mental retardation. This study has been completed and reported. If you are interested you may wish to refer to PART II of the January, 1958, issue of the *Journal of Diseases of Children.* Dr. Masland recently left the NARC to join the staff of the National Institute for Neurological Diseases and Blindness as Assistant Director.

While the Masland report is not an

original experimental research, the report of this survey has had the effect of giving direction to further studies into the causes of conditions resulting in mental retardation. The breadth and significance of the report may be implied in this brief quotation from the introduction:

"In the following report an attempt has been made to indicate the areas of research which are relevant, to summarize the state of our knowledge in each of these areas, and to point out new areas or new approaches which might be fruitful. It must be recognized that such an attempt is bound to fall short of its goal. Many of our most important advances in medical knowledge have come from research in areas apparently completely unrelated to their eventual application. For this reason, it would be inconceivable that this paper could include references to all those areas of research which may ultimately bear on the problem. The most that can be said is that the areas of research outlined here are ones which at this time are clearly related to it.

"It should be further emphasized that this paper does not attempt to provide a complete bibliography of literature regarding the causes of mental deficiency. The bibliography included is primarily for the purpose of providing references to review or summary articles which are of value to those interested in a further investigation of the topic under consideration or which serve to indicate the status of research in a given field."

This report is confined entirely to physical causes of conditions which result in mental retardation. Dr. Masland has reviewed the pathological studies in the area of mental retardation. He has summarized the literature related to the prenatal, perinatal, and postnatal periods concerning mental retardation. He has also discussed the literature related to the regeneration of the nervous tissue. Related genetic studies and theories have also been included in Dr. Masland's report. I do not propose to dwell on the detail of this report, for there are those more able than I to speak intelligently about it. I do want to say, however, that the incorporation of this report in a journal of the American Medical Association is a measure of the stature of the work of NARC.

The growth in the quality of the research program of NARC has been so remarkable that a new phase has developed. NARC now has a National Research Fund. This effort has been added to that of the Research Committee. Through this Research Fund it now becomes possible for NARC to supplement the research work being done through public and other agencies.

Now that an intensive effort has been launched on research into the causes of mental retardation, it is, in my opinion, highly possible that interest will grow and opportunities develop for research into the habilitation and rehabilitation of the mentally retarded, including the blind mentally retarded.

If the abilities of these persons are to be used to the utmost for improvement in self-care, independent living and vocational skills, in limited or full degree, it is necessary for us to identify the premises upon which we examine into the developmental problems of these persons.

The parents of the mentally retarded, when they organized NARC, conceived three objectives, namely:

1. To secure for all retarded children and adults the benefit of care, treatment and training appropriate to their disability; and to encourage the development of integrated community and residential programs in their behalf;
2. To develop a better understanding of the needs of the retarded and their families by the general public, professional groups and legislative bodies; and to work cooperatively with all agencies

and media, public and private, toward that end;

3. To promote and stimulate research into the causes, cure and prevention of mental retardation, the development of rehabilitation techniques, and personnel training and recruitment.

At this point allow me to withdraw from my role as member of the Board of Directors of NARC and speak as a professional person. What, I ask you and myself, does this activity of NARC mean to us?

I am going to be bold and venture on my own to try to answer this question. My answer will not be complete, but I am sure it will be provocative and stimulating. I hope, too, it will suggest to many of you a direction for research.

To fathom fully the implications of these developmental phenomena about which I have been speaking, it is necessary to make an orderly mental approach. Let me first suggest that we divide our concerns as professional persons into three areas: first, the current practices; second, the laws, regulations, authorities, etc., through which we work; and third, an area which I shall name later.

First, let us list a few of the topics we might include as current practice in the education of blind, mentally retarded, or other children and adults. We could list elementary, junior high, high, college, vocational, adult, preschool, residential school, special class, school year, school age, textbooks, Braille and Braillewriters, raised maps, subject areas, graduation, standardized achievement tests, etc., accounting of receipts and expenditures, schoolhouses and a host of other similar topics. Now let us figuratively throw these things out the window. In other words, let us try to set them out of our minds.

Next, let us look at the national and state constitutions relating to education and human beings. Add to this the laws which now exist and the regulations of official boards and agencies relating to the welfare of human beings. These things, too, are all man-made. Let us throw them out of our mind's window temporarily while we broach the next, or third, area.

This area I would like to call "the important premises" area. In our concern for the health, education and well-being of children and adults, what are the important bases which we might say are acceptable and defendable in the light of the thinking of our nation in 1958?

Now, let me ask you, too, what are the important bases which we will be able to say are acceptable and defendable in 1965, 1975 or 1985 as a result of the objectives and efforts of the NARC? Are you sure, at this time, you can say with certainty what is important?

In attempting to answer this question as a professional person I have done a great deal of study. I have turned to many sources for help. I have found little that guides me in my thinking.

The literature of the Educational Policies Commission has in it some very intriguing statements, but when I ask, what are the important premises, bases, principles, guidelines to guide me in the rendering of professional services to any one person, I find little help. This is especially true when it comes to the blind mentally retarded or the very severely handicapped.

To you who are so intently engaged in the education of the blind, allow me to develop further my line of reasoning by direction some questions to you.

How do you define "education?" As you determine the educability of a given blind child, do you examine and test for his readiness for Braille? If he falls a little short, do you consider him now for pre-Braille or Braille readiness? Perhaps some of you do all this and something more.

It is possible that some of you are guided more by the dictionary meaning

of "education." To you "education" means "educo"—to lead out, or to draw out. You are more concerned about the application of courses of study or prescriptions to draw out or lead out the person to be educated.

Some of you are now anticipating that I am about to question the adequacy of either of these positions. If you examine the educational literature for reports on the curriculum development of the blind mentally retarded you will note that even in these few reports the emphasis is on the prescribed activities. As I study these reports I am left with the impression that the authors are reporting on blind mentally retarded children who would range from I.Q. 65 to I.Q. 85 on a Hayes Revision of the Binet.

Allow me to think out loud so that you may share my thoughts.

The chairmen of the committees of NARC to whom I have referred are thinking about *all* mentally retarded. What do we as educators have to offer the blind mentally retarded, or the mentally retarded, or the emotionally disturbed who fall below this learning ability? These chairmen are working for the services which will benefit all mentally retarded. Do we as professional people have anything to offer to the mentally retarded below the ability of the few blind mentally retarded now being provided educational programs? Are we going to give the leadership to answer this question, or are we going to wait for lay people to show us the way? I see nothing wrong with any person showing the way, but must ask, how adequate am I as a professional person when I cannot answer concisely the probing questions of these lay leaders? How adequate am I if I become emotional and fail to listen to these people? When these lay leaders ask me what premises do I use to guide me in the determination of the educability of any child, what am I to say?

Shall I answer thus? If your child fits into the prescribed courses which our school offers, he is educable, and if he does not, he is not educable? Such a reply might well draw a protest—"But my child exists. He is here. He is real. The physicians have confirmed he is blind. The physicians also advise me he is mongoloid. They will take no position on the question of educability. This question the physicians feel is one for the educators. What am I to do as a parent? Hide my child in a bedroom—for the remainder of his life?"

The parent continues. "As parents, my husband and I need the help of educators who are expert in their knowledge of learning. We need to be objective and understanding of our child. We think of ourselves as the first teachers for our handicapped child and for our other children; but we are not skilled in the analysis of any of our children. We depend upon professional educators to help us deal constructively with the reality of each of our children."

At this point I explain to this mother that I am but a servant in a school—a professional servant. I am not free to provide services except as they are authorized by the administration and board. The administration and board are very sensitive to community attitudes and would not be sympathetic to providing services against the will of the community. Your child is very real. He exists. He is blind. He is a mongoloid. In the examination which I made I found him responsive to affection, consistency and to those little challenges I gave to him to examine him. I noted that he cannot yet tie his shoes, sort them for his feet, or lace them. I noted his stubby fingers and the fact that his blindness bars him from imitation. Yet, I would not suggest that he is not ready for instruction in these tasks. Instruction of this kind is not yet generally available and where provided it is on a trial and error basis. This is not a very encouraging picture for the parent.

The parent, after a pause, continues: "I shall work for these services. I shall not spare myself. I shall turn to my friends in the community and to my church.[1] We shall have the educational services my blind mentally retarded child needs. This we shall see, for people will listen to reason, and I shall reason with all that is in me. Thank you for your help."

If this is what we are to see, it is necessary for us to realize then that the first basic premise in the provision of educational services is the reality of the person. We must recognize that what is reality in one person is not necessarily reality in another. Individual differences will demand of you and of me an ability to inquire into the educability of persons as never before. Our prescribed courses in the same or modified form will continue. We will, however, enlist these prescriptions on the basis of their applicability to those to be educated.

We must pause at this point, for reality is characterized by growth and regression. Here we need our algebra. Here we must think with the help of plus and minus. When regression—that is, persistent and continuous regression—occurs, what is the role of the educator? To the general of the Army, retreat, withdrawal, and rear guard action are as important as the offensive action. As educators we have learned little of our role in human regression.

If we are to face the realization of these parent objectives, and these are the objectives of NARC, we must realize that there is a tremendous need to think through the basic premises which are and will be acceptable and defendable in the extension of educational services to persons.

You may well question whether or not putting a great deal of effort in this direction is defendable when we have so many other problems. This question we will have to face continuously. Let me, however, make a few remarks.

In Goodwill of Tacoma a special vocational evaluation program has been established for the mentally retarded. One half of those admitted as mentally retarded have turned out to be other than mentally retarded.

Research strongly suggests that this is a problem for all of us. For any of you who have any qualms about facing services for the blind mentally retarded, I would like to assure you that at present these problems are being faced. One of the healthy aspects of community planning is the fact that these topics are being discussed.

Any of you who feel that this problem is peculiar to the mentally retarded would be well advised to do a little study in the current literature on genetics. It may be a little startling to learn that any one of us may be the carrier of zero to ten recessive teratogenic (or monster producing) genes. The mentally retarded are by and large the children of us.

In conclusion, I would like to ask where you think the research program of NARC will go in the next few decades? If what I have said is objective and representative of leadership in NARC, do you think research will be restricted to physical or medical aspects? Is it possible that the talents of each one of you might serve well in the analysis of educational problems for mentally retarded who are blind? Is it possible that such researches may well contribute to the total knowledge concerned with the acceptance of the reality of each person and his optimum development?

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[1]There is evidence that parents of the mentally retarded have been turning to the church for help—and that they are getting help. I would like to mention specifically Charles F. Kemp's, "The Church: The Gifted and the Retarded Child," published by The Bethany Press, St. Louis, Mo., c1957.

A Report on the Grade 1 Workshop

AAIB CONVENTION, JUNE 1958, VANCOUVER, WASHINGTON

Mrs. Jerrine M. Lucas, Chairman Mrs. Marion Grew, Co-Chairman
Miss Angela Bourne, Recorder

Since there were such a large number signed up for the Primary Workshop, it was decided to divide into two sections: those interested in First Grade and those interested in Second and Third Grades.

In the Grade I Workshop, there were 20 participants, 12 of whom taught in residential schools and 8 in public schools. We had one member from Ontario, Canada, and another from Kalimpong, India, so actually we were an international group with a great variety of backgrounds and teaching environments. The class loads of the members had varied from 5 to 17 pupils per teacher last year. The people in this group had worked with a total of 171 blind children during the past school year.

We discussed 20 specific problems, spent two hours on evaluation of Mr. Egbert Peeler's standardization study, and one hour with Miss Edna Schmidt who had just completed her master's thesis on adaptations of reading games for use with blind children. We urged Miss Schmidt to have her games published so we could all have access to them.

In this report are the highlights of points discussed, conclusions reached, and recommendations made. We do not claim to be authorities; the following statements merely express how most of us felt about these problems.

Editors Note: Since many ideas, which may be helpful to teachers unable to attend, were discussed, and since much of the discussion will not be carried in the Convention Proceedings, we are pleased to give our readers this report.

Blind Children and Their Parents

Responsibilities of and helps for parents of blind children were discussed at some length. It was agreed that many parents need concrete help. One school sent home to the parents of children planning to enter first grade, a list of experiences frequently had by the characters in pre-primers, i.e., sand-box, family picnics, teddy bears, pets, etc. Thus, if the children had experienced these things themselves, they would better comprehend and therefore enjoy more fully the stories they would read in the first grade. It was also agreed that much reading by parents to children would increase the desire to learn to read.

It was stressed that we must not forget the parents' point of view, the individual differences in children, parents and homes, and that we must take into careful consideration the problems of rejected blind children from all socio-economic levels.

We found that many schools had Parents' Clubs or Mothers' Clubs and that same schools sent a letter each month to the parents.

The fact that many children are under the almost complete influence of women both at school and at home brought forth the suggestion that father-child relationships be encouraged.

Mannerisms

The problems of mannerisms was discussed with various suggestions presented as being helpful. It was suggested that substitute activities may sometimes be presented to the child to take the place of these motions. For example, to take the

place of waving hands, let the child make a pinwheel and therefore substitute a similar acceptable activity. One teacher has a "swaying time" to recorded music occasionally during the day; children were expected to limit their swaying to those times. Ideally, it was hoped that as the children grew older and "swaying times" became more infrequent, the children would cease swaying entirely.

The problem of retrolental children's pressing against the eyes brought forth the suggestion that some ophthalmologists had stated that prevention of this so-called "massage" of the eye may cause the closing of the Canal of Schlem and thus cause glaucoma. Since there was some question on this, we decided we would like an authoritative answer. Therefore, it was recommended by the workshop group that the American Foundation for the Blind publish results of any research done on the cause and the effect of pushing against the eyes of retrolental children and, if such research has not been conducted, that it be encouraged in the near future.

Following Group Instructions

It was agreed that many first grade children do not respond to general classroom instructors; that they wait until they are specifically and individually told what to do. It was suggested that many group experiences be given to help alleviate this problem. One teacher, in order to encourage promptness in following directions, gave specific drill in obeying commands and used a stop-watch for timing. Most teachers agreed that this problem disappeared as the children matured.

Discipline

The problem of maintaining order in a classroom is not a special "blind" problem. Isolation from the group and deprivation of privileges were suggested as means of handling non-conformists. It was stressed that the quality of the teacher's voice plays an important part in classroom response to her, that she should play up the positive rather than nag at the negative, that she should strive to make each child feel a responsibility for his behavior, and that she should always be consistent. If the teacher says she will do something, then she must do it or her words will be meaningless to the children. If a child is deliberately endangering himself or others, that is the time for quick, dramatic action by the teacher.

The problem of sudden frightening noises and extraneous mysterious noises was discussed. At one school, when a startling noise occurs, the teacher says, "Whammo!" and that relieves the tension. It was agreed, however, that when there is real alarm in the voice of the child, he needs help and should be comforted and given an explanation.

The little noises, such as a radiator hissing or a lawn mower outside, which can be distracting to some children who have not learned to be discriminating in their listening, can be explained briefly and matter of factly without disturbing the class too much. Some teachers have a regular listening time after which they discuss identification and causes of noises heard during those few minutes.

The fact that so many first-grade blind children talk out of turn so often was discussed. It was felt by the group that this was most likely caused by the child's trying to keep track of the location of the teacher. If the teacher can occasionally let the children know where she is by not working in silence for too long a period, she may find her students more content to sit quietly and work.

Testing

After discussion of the present psychological tests for blind children, it was recommended by the group that standard-

ization of present evaluation scales or construction of new standardized psychological tests for the blind be encouraged by universities and/or the American Foundation for the Blind.

Reading

It was agreed that confusion of signs (such as d, f, h and j) and reversals were usually solved by maturity and experience. A need for a greater number of easy library books was expressed and a committee was set up to choose titles and to investigate the possibility of having them put into Braille.

When the subject of Talking Books came up, the group formulated another recommendation: More Talking Books for young children should be reproduced and they should follow closely the original classics; extraneous sound effects and asides should be kept to a minimum and, wherever possible, a male voice should be used.

Writing

The problem of children having hands too weak to use the Braillers properly was discussed. It was suggested that the kindergarten and nursery school activities should help in developing strength in the hands and fingers. It was pointed out that this weakness is sometimes due to mild spasticity, and that normal fingers almost invariably developed strength through use.

Recommendation to The Journal

This group also recommended that *The International Journal* include more articles on the teaching of reading and other teaching techniques. We did this, tongue in cheek, because we realized that it was up to the members of AAIB to contribute articles themselves. It was pointed out by one of the members that, if each of the 20 workshop participants contributed one small article per year, that would cover quite a few *Journal* pages.

There appears to be a great need for suggestions on handwork—preferably, if possible, handwork that is interesting and attractive to the sighted, as well as to the blind. If you have a favorite project, send it to *The Journal* and make it easier for them to follow through on our recommendation!

Drill Games

All teachers like and need new games for drill purposes in the primary grades. The chairman of the workshop group agreed to send questionnaires to the members of the group and thus collect favorite games of all those present. These will then be compiled and added to the booklet of games formulated by an earlier workshop. All persons interested in obtaining this booklet, which should be available early in 1959, should contact Mrs. Jerrine Lucas, Roosevelt School, San Leandro, California.

Joint Uniform Braille Committee Completes Code Revision Study

By Paul J. Langan

Counselor for the Far East, American Foundation for Overseas Blind

and

Chairman, American Joint Uniform Braille Committee

Braille readers throughout the country will be interested in the results of the study made during the past year on the proposed changes in the Braille code. This reader-sampling was accomplished through the distribution of a ten-page reading illustration prepared by the Joint Uniform Braille Committee in an attempt to determine the difficulty or acceptance of the proposals. Approximately 20,000 copies of the pamphlet were circulated in the field, giving everyone who wished to do so an opportunity to see the proposals on embossed pages. The Committee is indebted to the hundreds of readers whose response made this study possible, and to the many groups, agencies, schools, and associations which submitted opinions and constructive suggestions. This brief summary of the results will follow the procedure used in outlining the changes in the pamphlet, taking up, in order, the deletions, the alterations, the additions, and finally the basic rule changes.

In reply to the only objective question asked on the inquiry, it was interesting to note that more than two-thirds of those responding stated that they had no trouble reading the illustration once they had read the introductory explanation. Moreover, more than half of those who gave favorable answers qualified their responses by stating that they did not agree with some of the proposals and would not like to see them adopted.

Quite understandably, the readers failed to see anything to be gained by omitting something that was already an accepted and established sequence in the code. This section referred to the deletion of the word signs for *altogether*, the *conceive* and *deceive* family groups, and the lower signs for *bb, cc, dd,* and *gg*. Though it is recognized that there is some space saving by using the low *b, c, d, f,* and *g,* for these double consonants because of their frequency of occurrence, word uniformity cannot be achieved under the present rule affecting the *be, con,* and *dis* contractions. The proposed rule would have permitted correction of this irregularity in the system, but the readers did not agree and preferred to retain the present usage.

In the matter of the proposed alterations, the readers not only showed a wide and varied pro and con, but also made several hundred suggestions of their own which they would like to see adopted. The suggested forms for *today, tonight,* and *tomorrow* met with almost universal acceptance, but many expressed reservations over the proposals for *character, less, cannot,* and *immediate,* thus placing them in the doubtful column.

Most readers responded with firm opinions on the section of proposed additions to the code, and, in addition, expressed themselves very heartily. Their suggestions ran all the way from substituting the Morse Code to the full incorporation of all Grade III contractions and abreviations. However, *afternoon, friend, first,* and *question* received the endorsement of the readers who replied, while *don't, follow, haven't,* and *yesterday* were about equally liked and disliked. The remaining proposals in this section were definitely rejected. This will be good news to the far majority of the correspondents who were so violently opposed to such unusual word signs as the *gh* for *he* and the *ing* for *is.*

As was to be expected, few readers were concerned over the proposed changes in the basic rules. Most of those responding frankly stated that they never had seen the rules and had no comment. Some few Braillists and teachers did express special approval on the recommendations numbered 1, 2, 3, and 5, which, briefly, alter the rulings on lower signs following one another, contractions overlapping syllables, the preference of the *ar* sign over the *ea* sign, and permitting *com* now to be preceded by a capital sign. The changes numbered 4 and 7 have to be rejected in view of the responses received on the *be, con,* and *dis* usage, and the contraction proposed for *less.*

This now brings us to the conclusion of a long eight-year project. By the direction of the AAIB and the AAWB, the Committee will now proceed with the revision of the code for Standard English Braille. The new system will become effective January 1, 1959, when all the presses and transcribers will begin to use the new forms and rules. Readers need not be unduly alarmed over this announcement, however, as the new system will not disturb their present reading ability. The major changes are in the rules and will achieve greater uniformity and standardization of embossing and transcribing, thus bringing about, in fact, greater ease and facility in Braille reading.

It perhaps will be appropriate to mention here that teachers, transcribers, and professional users of braille music will be pleased to know that the new REVISED INTERNATIONAL MANUAL OF BRAILLE MUSIC NOTATION, 1956, by H. V. Spanner has been officially adopted in this country and will be put into effect beginning September 1, 1958. Copies of this Manual are now available in the United States, both in Braille and ink-print editions, from the World Council for the Welfare of the Blind, 22 West 17 Street, New York 11, New York.

A Work Experience Program

By Eldon Wolfe, Teacher

Michigan School for the Blind

At the Michigan School for the Blind, as in every high school, there are certain students who are not able to do academic work satisfactorily. These students need to have concrete learning experiences in which they can compete with others in order to develop self-confidence and personal worth. It is also evident that these students must find manual work of a repetitive nature if they are to earn a livelihood after leaving our school. Many parents do not, or cannot, accept this fact. Many do not require their children to do tasks around the home or to accept any responsibility in the management of the home.

To illustrate, one boy in our school had never set up or climbed a stepladder; another had never used an oil can because his father had always oiled his wagon and other toys for him. These are simple tasks but useful in everyday living. Some parents neglect this basic training because they can do it faster and more easily themselves. The opportunity for practical experience in mechanical lines is limited in most homes, perhaps due to the feeling on the part of the parents that to permit experimentation would only lead to disaster.

In past years we have had several students who volunteered their services at the school because they wanted something extra to do. Later on they found that these extra experiences helped them after they left the school and tried to find employment. One of our former students who has helped in the Health Center is now working in a local hospital and another secured a position in a convalescent home.

Some years ago a graduate of our school was asked what his advice would be to students who were still in school. He replied, "Tell them to try to get into everything the school has to offer. That is what I tried to do. Now, if I can't get work caning chairs, I can tap shoes. If I can't find work repairing shoes, I can make brooms. I can always find something to do." From our long acquaintance with this young man, we know his statements are true. When on campus, he was always on hand to volunteer his services for all school activities. Here was a person who wanted to know how to do many things.

It had long been felt by the faculty that some kind of a "work experience" program was needed for those students who are not capable of doing academic work on the high school level. Our first step was to make an inventory of the kinds of jobs around the school which might offer an opportunity for work experience. We found some two dozen types of work in which students could participate. The daily operation of the Michigan School for the Blind requires several kinds of skills such as carpentry, plumbing, nursing, food preparation, laundry, pressing, janitor work, and child care.

In September, 1956, a new program was started at our school to give this group of students an opportunity to relate learning to practical, everyday problems. The purpose of our classes in "work experience" is to bring the student in contact with various types of skills and give him or her supervised experience in learning the best way to do them. Some will learn some type of assembly work, working with other people, and a knowledge of the steps involved in making repairs in the home.

In the "work experience" program, some students have regular assignments such as pressing, laundry, working at the Health Center or assisting with the children in the Kindergarten with lunch and wraps. Some have helped the janitors doing sweeping and mopping floors and arranging the chairs in the auditorium for programs. On occasion, they have even substituted for an employee who was absent for a few days. They enjoy this responsibility.

There are work orders coming into the business office every day from different departments. The instructor of this program sorts these work orders and selects those which are within the ability of the students. Jobs which are beyond the students' ability are sometimes observed as they are performed by an employee, thus widening the students' experiences. Also, students may do the same task as an employee and then compare the quality of workmanship.

Last year we removed the plank floor in the school garage to prepare it for a concrete floor. The specifications called for a five-inch floor and repair of the door-casing which had rotted at the base. The students had some difficulty loosening the heavy planks and removing the joists. They learned the value of a lever, hydraulic jack, screw jack, rollers, etc., used to make the work easier. Then came the filling with cinders and a method for leveling to insure the uniform thickness of concrete. From these dimensions we figured the approximate amount of ready-mixed concrete which would be necessary. We discussed the best method of anchoring the door-casing to the floor, which was to embed iron in the concrete and fasten to the door-casing with lag screws. They were very interested observers when the men later poured the cement and leveled it. They felt that they had had a real part in the project. Another similar project was the construction of a curb to control the flow of water around the powerhouse.

Since the center for this program is located in the carpentry shop away from the School Building, it brings the students in close contact with the school maintenance employees so they have some knowledge and a little more appreciation of the work involved in operating a school.

Through the generosity of the Ford Motor Company, the Oldsmobile Company, and a local garage, the school is fortunate in having a number of starters, generators, transmissions, etc., which can be assembled and disassembled to give the students experience in this area. Also we assemble simple locks. We had enough simple locks so the boys could pretend they were working on an assembly line. The first trial in lock assembly ranged from three to nineteen minutes. After practicing, the same type locks were assembled in from fifty seconds to seven minutes. Of course it was found that a few students were unable to master even the simplest locks. However, the project did provide an opportunity to develop finger and muscular dexterity.

It was interesting to hear one boy remark, on his return from home after Christmas holidays, that he had taken the locks from the doors of his home, made repairs and adjustments so they worked like new. This student also plans on putting in new sash cords at home.

In all cases there is an attempt to make the situation realistic by pretending the student is an adult working on a real job. Certain standards are required, and if these standards are not met, the job must be done over the second or third time until it is correct, or until the instructor feels certain it is the best the child can do.

Sometimes students have brought things from home, such as electric motors or gas engines for power lawn mowers. Often these articles are beyond repair, but it does provide experience in seeing what makes them "tick."

We have done much furniture repairing. Experience has taught us that systematic procedure is necessary. After regluing the side members and legs of a table, the boys found that the top would not fit. It was necessary to cut the dowels, drill new holes and reassemble. Now they check the parts more closely.

Recently we received an order from the occupational therapist for three dozen weaving frames. We pretended these were to be made on an assembly line. After working on them, the student realized how exacting his particular job must be to have the finished product pass final inspection. It was necessary to get out enough material to make fifty in order to get thirty-six which were acceptable, so they could see how important it was for each one to do his part in the assignment well.

Another point brought up at this time was a discussion of "labor cost" for the kind of work performance they are able to do. Rather than speak of their being too slow, we say their "labor charge" is too high. In the repair of a motor, when the labor cost was figured we found that the catalog list for a new motor was almost five dollars below the charge for repairing it.

We staked out and spaded several flower beds on campus. This project gave an opportunity for some practical use of lineal and square measure. Considerable time is always spent in discussing the problems in each project and reasoning out the best solution.

Sometimes a student is appointed supervisor of a project so he may get some knowledge of the problems involved in being in charge of others. This will bring out several topics for discussion, such as the need for understanding and getting along with others.

We sometimes study the "want ads" in the newspapers and talk about job opportunities and which ones they think they could do.

In discussing work performance with the students, we feel it is necessary that we be frank and outspoken. They must understand how they are rated. Personal characteristics such as initiative, appearance, judgment, and speed are discussed. They must think how their work would be accepted on the market in competition with sighted people. In a recent instance, a student was absent from her job a considerable amount of time with an assortment of excuses. She was notified that if her absence from work was continued, she would be considered "fired." Since the notice, her attendance has been perfect.

In another instance in the Health Center the worker was making little attempt in getting along with the employees. So she was "demoted" to janitress. As a result she immediately began working hard to regain her old assignment.

Students are assigned work according to their ability and in which they have some interest. However, this is not always possible if there are too many requests for the same type of work.

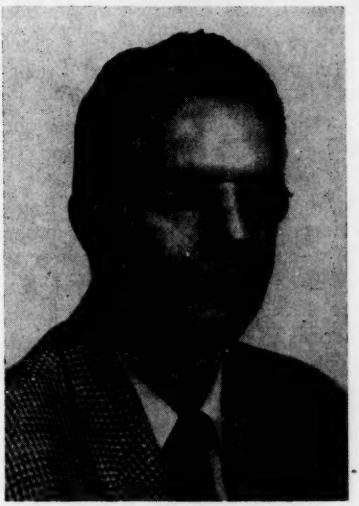
There are follow-up visits to the homes of these students during vacation periods so the parents will better understand this program and can assist their child when he is home. Suggestions can be made concerning work projects he can do at home.

It has been interesting to note how anxious the students are for this type of activity, and the younger children look forward to the time when they may have an opportunity to participate in this program. It has been proved that some of these children are not lazy, as was supposed, but were frustrated and unhappy in not being able to keep up in their academic work. In this program they are able to meet with a certain measure of success on some things when given a chance. We find they are better school citizens because of it.

The President's Corner

By Donald W. Overbeay, President

American Association of Instructors of the Blind



Donald W. Overbeay, new president of the American Association of Instructors of the Blind, is the Superintendent of the Iowa Braille and Sight Saving School, where he has been since 1949. Prior to this, he served as Principal at the Kansas School for the Blind, and began his career in special education at the Illinois Braille and Sight Saving School. He holds a Bachelor's Degree from Illinois College, and has his M.A. from the University of Illinois. He also has had work in special education at Columbia University. Mr. Overbeay has served the Association as First Vice-President, Second Vice-President, and Board Member prior to becoming its President for the 1958-1960 biennium.

V. R. Carter, Editor of *The International Journal for the Education of the Blind*, has again given the President of the AAIB an opportunity to submit material for The President's Corner. As your incoming President, I shall use this privilege and opportunity as a means of keeping you informed of the activities of the Board of Directors during the interim between conventions. Your comments, suggestions, and recommendations will be appreciated.

Immediate Past President Dr. Robert H. Thompson presented a twelve-point program for the AAIB at Worthington in 1958. (See *International Journal for the Education of the Blind*, Vol. VI, No. 1, October, 1956, pp. 22-24.) Because of his intelligent leadership and tireless energy, each point of the long-range program has either been consummated or brought closer to fulfillment. For example:

1. A long-range planning committee was appointed.
2. The AAIB is now legally incorporated under the laws of the State of Kentucky.
3. AAIB income has been increased. Over $12,000.00 has been made available for Institutes for Houseparents and a Workshop for Arts and Crafts Teachers. (A more detailed report on this and a closer look at AAIB finances will be the subject of my December "Corner".)
4. Ten Thousand Dollars ($10,000.00) for teacher recruitment has been received from the Avalon Foundation. Dr. Merle Frampton, New York Institute for the Education of the Blind,

is Chairman of a committee selected to administer this generous grant.

5. Egbert N. Peeler, Chairman of a Committee on Standards and Evaluations, has developed an evaluation instrument in the areas of Elementary Grades, the Library, General Instructional Equipment, Cooking and Sewing, Arts and Crafts, Music, General Science, and Permanent Records — Academic, Medical, Psychological.

6. A change in the Constitution of the AAIB at Vancouver, Washington in June empowered the Board of Directors to appoint an Executive Director or Secretary. Much good work has already been done to help realize the goal of a full-time general secretary in a central office.

7. The Board of Directors of the AAIB and the American Foundation for the Blind have approved a statement of "Joint Services and Mutual Assistance Between the AAIB and the AFB." (See *International Journal for the Education of the Blind*, Vol. VI, No. 4, May, 1957, pp. 91-93.)

The introduction to this agreement states that the American Association of Instructors of the Blind is "a national membership organization which serves as a professional and coordinating resource for all administrators, teachers, and auxiliary personnel engaged in the area of educational and related services to blind young people." We pledge ourselves to continue as a professional association and not to assume the role of an agency.

I am convinced that we shall never reach our potential without the services of a competent, full-time executive secretary. Such a secretary could coordinate the efforts of the association, double its membership, promote research, help assemble vital statistics, further explore and develop liaison with sister organizations, and become editor-in-chief of *The International Journal for the Education of the Blind.*

Up to the present time the work of the Committee on Standards and Evaluations has been the work of one man — Egbert N. Peeler. This Committee must be expanded. While all schools and classes must meet state and local standards, these are for schools for sighted pupils and not established specifically for our programs. The workshop groups at Vancouver which considered the results of Mr. Peeler's study were unanimous in urging the Board of Directors to have this study continued. All schools, classes, and members must cooperate.

The AAIB has looked with pride on its long history and its professional status. Whether it continues to grow in effectiveness depends upon the support of those who are now members and an expanded membership. We must work hard for increased membership. Every administrator, teacher, and houseparent of blind children should join. There are hundreds of parents who would be pleased to join if given the opportunity to do so. As Past President Bob has said, "Too few of our members and institutional colleagues have been 'selling'. An effective AAIB cannot be forged from indifferent members. It is every member's personal responsibility to sell AAIB . . . The AAIB can only be what you and I make it."

Ina E. Hubbard — An Appreciation

By Gretchen Traubitz, Librarian

Missouri School for the Blind

When Ina E. Hubbard passed away on June 9, 1958, the field of special education lost one of its most enthusiastic and dedicated persons. In the thirteen years during which she was principal of the Missouri School for the Blind, she contributed far more to this area of work than most of us can hope to contribute in a lifetime.

Having entered this field of education following the death of her son, John, who was partially sighted and a pupil at the school, she attacked the work with a devotion which is seldom seen in any educator. No teacher nor pupil in the school ever had a problem which was too great nor too insignificant and trivial for her to give it her very best efforts. She answered many calls beyond the line of duty, and she gave of herself unselfishly and often tirelessly to the many demands in her last professional position. Death came to her while she was almost literally "on the job."

Ina Hubbard was a leader in the field. As principal of the school, she served as chairman of the Principals' Division in the American Association of Instructors of the Blind. She also served as president on both the local and state levels of the International Council for Exceptional Children, and as constitution chairman on the national level. Many there were who felt the wisdom of her wise counsel, and who saw in her a stronghold on which to lean.

Mrs. Hubbard's earthly sojourn is done, but not so her influence on special education. So long as there are those who considered her a guiding light, the many things for which she stood will continue to be basic principles. Her mark will surely live throughout the ages.

Everett E. Wilcox Receives Degree

The degree of Doctor of Education was conferred upon Everett E. Wilcox, Superintendent of the Oregon State School for the Blind, by the University of Oregon in graduating exercises June 15, 1958. Dr. Wilcox completed a thesis entitled "Characteristics, Training, and Performance of Houseparents in Residential Schools for the Blind" toward this degree. He also holds a Masters degree from the University, and a Bachelor of Arts degree from Willamette University in Salem, Oregon.

Dr. Wilcox first became interested in work for the blind as a student worker at the Oregon School in 1938, and was hired as a teacher until 1942 when he entered the United States Navy. He returned to Oregon after the War as a training officer for the blind and seriously disabled veterans, holding this position until 1949, at which time he became the Principal of the Oregon School, succeeding Mr. Walter Dry as Superintendent in 1956.

Dr. Wilcox is quite active in his chosen field of special education, serving as a Director of the American Association of Instructors of the Blind. He has served in an advisory capacity in several conferences for houseparents; was a member of the U. S. Office of Education Committee reporting on "Competencies Needed by Teachers of Children Who Are Blind"; and participated in the work session, "Itinerant Teaching Services for Blind Children," as well as other institutes and conferences.

DATES TO REMEMBER

1958

Oct. 5-8—Eastern Conference of Home Teachers of the Blind, Richmond, Virginia.

Oct. 13-15—National Rehabilitation Association, Annual Convention, Asheville, North Carolina.

Oct. 20-21—National Braille Club Second Annual Conference, New York Association for the Blind (Lighthouse), New York, New York.

Oct. 23—American Foundation for the Blind, Foundation Day, New York, New York.

Oct. 25-28—American Printing House for the Blind Centennial Celebration and Annual Meeting of Board of Trustees, Louisville, Kentucky.

Oct. 30-Nov. 1—"Institute on the Education of the Blind," Annual Session of the Rhode Island Institute of Instruction, Providence, Rhode Island. (For information, contact E. G. Rosati, Supervisor of Education of the Blind, State Department of Education, Providence).

Dec. 2-5—American Public Welfare Association, National Convention, Statler Hotel, Washington, D. C.

1959

April 7-11—Council for Exceptional Children, National Convention, Atlantic City, New Jersey.

May 24-29—National Association of Social Workers, meeting in conjunction with the National Conference on Social Welfare, San Francisco, California.

June 28-July 3—National Education Association, Annual Convention, St. Louis, Missouri.

July 12-17—American Association of Workers for the Blind, Annual Convention, Hotel Statler, Detroit, Michigan.

July 22-31—World Council for the Welfare of the Blind, Second World Assembly, Rome, Italy.

(Please send dates of conferences, workshops, etc., to the Editor, V. R. Carter, RFD #5, Muskogee, Oklahoma, for publication.)

TO PUT IT BRIEFLY

News and Views from the Field

Journalistic adage: "Be brisk, be brief, be bright, be right!"

Those who missed the 1958 AAIB Convention in Vancouver, Washington can mark it up as a definite loss to themselves. Although not as heavily attended as several of the recent conventions, which have had the mid-America geographic advantage, it was a meeting of historic significance. Let us glance briefly at some of the happenings, reports, and achievements of this Forty-Fourth Biennial Convention.

First, and quite important to the Association, is its tremendous growth in members. Membership Chairman Max Woolly reported 1,247 members, and the pleasant part of all this is the increasing participation by public schools, with representation from 41, besides that of 14 miscellaneous agencies and 46 residential schools.

The 23 separate workshops, under capable direction of Miss Dorothy Misbach, Consultant in Special Education from California, got to the heart of a number of problems occurring in our field of special education, as many good ideas and much excellent professional knowledge were exchanged. When the PROCEEDINGS are out sometime this winter, we would strongly recommend a careful study by those who did not attend, assuredly, and by those who did attend, as well. Too much occurred in too short a space of time for any person to absorb it all.

New AAIB officers were elected, along with a new Board of Directors. Their names and addresses are carried in the inside back cover of *The Journal*. A giant stride was taken by the Association (not without some considerable debate) to permit the new slate to employ an Executive Secretary. It was felt by a three-fourths majority that such a person could do much to build the Association and promote its projects more effectively, so the constitutional amendment carried.

The Convention was well-planned and the 1956-58 officers and board are to be highly commended, as is Superintendent Berhow and the staffs of the two Washington schools (School for the Blind, and School for the Deaf). The weather: It misbehaved only one day (hot and humid), and was otherwise quite pleasantly cool.

Helpful hint: Are you ever confronted in the classroom or dining room by the problem of a child quite ill with upset stomach, with the almost inevitable accidental upheaval? What school person isn't? Have your janitor keep a can of sawdust handy. Sprinkle the area liberally. In a few minutes it can be swept up with scarcely a trace of odor left. (I learned this at the Convention!)

A reviving interest in bowling among schools for the blind seems to be occurring. Dr. Charles Buell's summer Physical Education Bulletin carries considerable on the subject. Get your physical education instructor's copy and read about it. Also, there is, in the making, a bowling league made up of schools for the blind throughout the United States and Canada. Teams will compete by mail and follow a regular schedule. Your school (if residential) has been invited to participate. At this writing, fifteen schools have signified that they would like to engage in league play during the 1958-1959 school year. Eight

others sent their regrets, but we expect them to come in at some future time, along with others who cannot, at the present, see their way clear to join in the league fun.

Congratulations are in order for four Southeastern schools for the blind, who got together in a track meet last April and formed the South Eastern Association of Schools for the Blind. Florida played host to Louisiana, Mississippi, and Tennessee. The first track meet consisted of both boys' and girls' events. Mississippi won the boys' meet, and Louisiana carried away the honors in the girls' competition. Association President Lee Iverson of Florida is hopeful that other schools in the area will join the group, and that competition will be expanded to other sports and academic events. SEASB is welcomed aboard by other older associations, Southwestern, North Central, and Eastern.

We would like to acknowledge with appreciation the copy of "LOOIS" — LIGHT Magazine, received from Beirut, Lebanon. The English translation tells of the fine work being done for the blind of that country, and is a welcome change from news of political unrest carried during the last several months in newspapers and magazines.

The second annual Music Festival of the Eastern Division of the AAIB, was held at Perkins last April 25-27. We regret that we were unable to print a complete account of this Festival in the May issue of *The Journal*, but it occurred too late to make the deadline. Mention is made of this festival, and another to which the Oklahoma School for the Blind was host last April, to show the importance of these activities to our schools, and with a hope that interscholastic meetings involving music, academic work, and sports are on the increase. Eight schools and over 150 pupils participated in the two festivals mentioned in this paragraph.

Accidental blindness continues to be a leading reason for many youngsters attending a school or class for the visually handicapped. Perhaps too few public schools place any emphasis in health and science classes on eye care and prevention of blindness. However, one public school teacher, Mr. William Sharkan, dramatically emphasized the importance of the eyes with his Raub Junior High class in Allentown, Pennsylvania. Mr. Sharkan bought masks, and had the class wear these to simulate blindness, conducting a number of experiments meanwhile to demonstrate the importance of eyesight, and how the other remaining senses must be relied upon when sight is lost. Needless to say, after a class period of make-believe blindness, these youngsters will remember the value of good eyesight. All public schools should adopt this idea. After all, eye care is primarily up to the individual.

Your *Journal* editor personally regrets very much that Dr. Alton G. Kloss had to bow out as president of the magazine's Board of Trustees due to press of school affairs at the Western Pennsylvania School for Blind Children, of which he is superintendent. Dr. Kloss offered much helpful advice and encouragement to this editor, who began his duties as a "neophyte" just two years ago; something that is deeply appreciated and never to be forgotten.

V. R. Carter, Editor
The International Journal for the Education of the Blind

The International Journal for

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1958-1960

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